

In the Claims

This listing of claims will replace all prior versions, and listings, of claims.

Listing of Claims

1. (Original) An ion sensitive field effect transistor (ISFET) comprising:

a non-single-crystal-silicon-base substrate;

a polysilicon layer formed above the non-single-crystal silicon-base substrate;

a source and a drain formed in the polysilicon layer, with a predetermined channel region
formed between the source and the drain in the polysilicon layer;

an insulating layer with a first contact hole and a second contact hole, formed above the
polysilicon layer;

a first electrode and a second electrode electrically couple to the source and the drain by the
first contact hole and the second contact hole, respectively;

a passivation layer formed above the insulating layer covering the first electrode and the second
electrode, wherein the passivation layer comprise an opening partially exposing a surface of
the insulating layer above the predetermined channel region; and

an ion sensitive gate formed in the opening above the insulating layer.
2. (Original) The ISFET according to claim 1, wherein the passivation layer is epoxy resin.

3. (Original) The ISFET according to claim 1, wherein the non-single-crystal silicon-base substrate is a glass substrate.
4. (Original) The ISFET according to claim 1, wherein the non-single-crystal silicon-base substrate is a plastic substrate.
5. (Original) The ISFET according to claim 1, wherein the non-single-crystal silicon-base substrate is an insulation substrate.
6. (Original) The ISFET according to claim 1, wherein the insulating layer is a silicon oxide layer.
7. (Original) The ISFET according to claim 1, wherein the first electrode and the second electrode are metal electrodes.

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